

Divided by a common language

SIR — Koreaki Ito's suggestion (*Nature* **382**, 666; 1996) that British spellings be abandoned in favour of US spellings to assist in electronic searching of databases has led to an interesting correspondence. A solution has already been implemented, at least with some database software. Stephen Smith referred to this solution in his letter (*Nature* **383**, 384; 1996): intelligent programming.

The UNESCO CDS/ISIS software, which is widely used in libraries and museums across the world, allows us to define such a look-up table, so that whether (behaviour or behavior) or (*Nicrophorus* or *Necrophorus*) (A. T. Schafer, *Nature* **383**, 384; 1996) is keyed in does not matter. The National Information Services Corporation (NISC) ROMWRIGHT software now provides automatic searching for plural/singular forms (fish/fishes), international and other spelling variants (harbour/harbor), and different constructions for compound words (groundwater/ground water/ground-water). I am sure that there is other software that provides the same facilities. What is now needed is pressure on database hosts and other vendors to provide the same facilities in their software. This seems a much more acceptable solution than trying to impose English or American spellings (or Australian or...).

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SIR — J. T. C. Sellick (*Nature* **383**, 569; 1996) has my sympathy. My family name is Ambrogi Lorenzini (without hyphen); my given name is Carlo. But *Current Contents* persists, in spite of my protests, in listing me as C. A. Lorenzini, which is both annoying and damaging. The reason is apparently that their computer software, following American usage, treats as a middle name any name coming after the given name when followed by another name.

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SIR — I was interested in the letter from L. M. Corrochano about authors with two surnames and their treatment by bibliographic databases. The correct citation of an author's name is vital for its subsequent retrieval, and databases usually have measures in place to ensure that names of authors are cited correctly.

That is certainly the case with CAB ABSTRACTS and CAB HEALTH, the

databases produced by CAB INTERNATIONAL Information Institute. These databases cover the world literature in agriculture and some aspects of human health, and so we have rules, based on international standards, covering the citation of authors' names for many nationalities. To give a few examples, Chinese, Indian and Hungarian names present their own problems. (See also Zainab Awang Ngah, in "Malay names: current practices in ascertaining the form of headings and sources for reference", *Asian Libraries* **5** (1), 19–33; 1996.) Transliteration is necessary for names from Cyrillic and Greek scripts, and we include author variants, wherever possible, to help the searcher to retrieve all relevant papers.

For Spanish names the rule is to cite both surnames when given, even when the second one is abbreviated to an initial (Juan Carlos Palacios C., for example, is cited as Palacios C., J. C.). However, for other nationalities where we are sure that they are surnames the rule is to cite only the last of the names, thus Sellick, J. T. C. Where they are hyphenated, both names are cited, thus Clark-Sellick, J. T.

Corrochano suggests that the option of hyphenating surnames keeps journal editors and database curators happy. It should also keep the authors themselves and database users happy, if the names are cited properly.

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Pump priming works in Singapore

SIR — Terence Kealey (*Nature* **383**, 474; 1996) claims that because of the establishment in Singapore of the National Science and Technology Board (NSTB) and the National Technology Plan in 1991, the rate of growth in the total research and development (R&D) budget fell after 1992. He claims that this is consistent with the laws of scientific research that he published in his book *The Economic Laws of Scientific Research*.

The effectiveness of NSTB can be measured most accurately by comparing the period just before and after its formation.

NSTB was formed in 1991 to promote economically relevant R&D in Singapore with the aim of enhancing our economic competitiveness. Before the formation of NSTB, from 1987 to 1990, GERD (gross expenditure on R&D) was growing at a compound annual growth rate (CAGR) of 15% (see table). However, since the forma-

tion of NSTB in 1991, GERD growth from 1990 to 1995 had a CAGR of 19%. This is more than double the GERD registered five years ago. Therefore, the rate of GERD growth since the formation of NSTB has been more significant in the past five years, compared to the few years before its formation.

Second, private sector GERD grew at a CAGR of 11% from 1987 to 1990. Howev-

GROWTH OF ECONOMICALLY RELEVANT R&D		
	1987–90	1990–95
Gross expenditure on R&D (GERD)	15%	19%
Private sector expenditure on R&D	11.1%	23.3%

er, between the formation of NSTB in 1991 and 1995, private sector GERD has been growing at a CAGR of 23% annually. So the rate of growth of private sector GERD after the formation of NSTB is more than double that in 1987–90. Furthermore, private sector GERD growth since 1990 (at 23% CAGR) even exceeds that for overall GERD, which grew at a CAGR of 19% annually. So government funding had not only not displaced private sector expenditure on R&D, but it had also stimulated greater R&D growth in the private sector. In fact the share of private sector GERD increased from 54% in 1990 to 64.5% in 1995.

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No relation

SIR — Philip Anderson's otherwise excellent obituary of Sir Nevil Mott (*Nature* **383**, 121; 1996) quite erroneously makes me Mott's nephew by marriage. There is no such relationship.

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Nothing new

SIR — Doo Jung Jin (*Nature* **383**, 662; 1996) would rename the kilogram "einstein" on the grounds that it is the only SI basic unit that is a multiple of another unit. Is (s)he aware that the einstein is a photochemical unit corresponding to Avogadro's number of photons?

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